OAK RIDGE NATIONAL LABORATORY

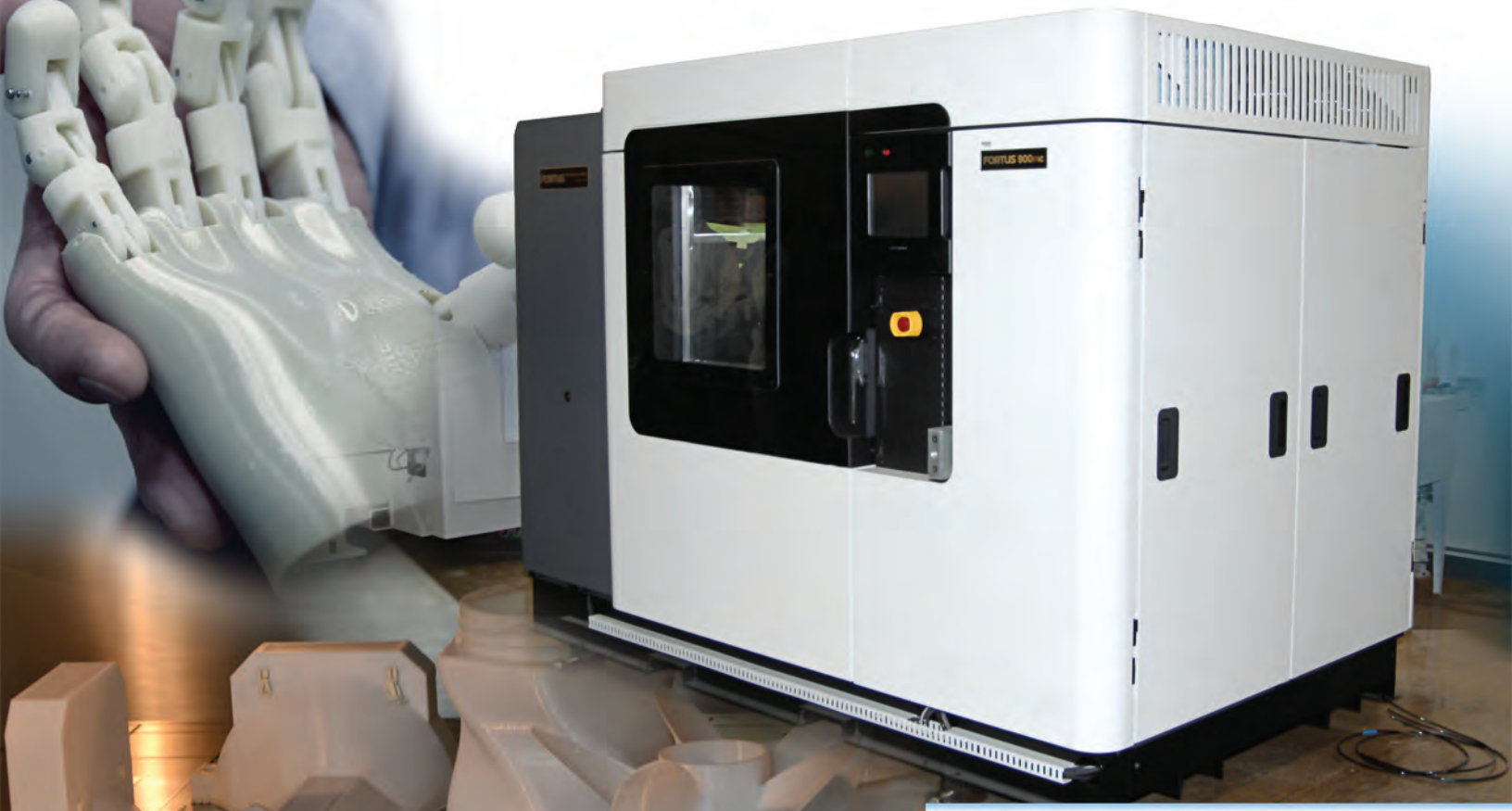
PARTNERSHIP WITH INDUSRTY

POLYMER ADDITIVE MANUFACTURING

Fused Deposition Modeling (FDM), a process developed by Stratasys, uses a heated nozzle to deposit small beads of thermoplastic material into a two-dimensional pattern. The extruded polymer hardens immediately upon contact with the underlying material and forms the foundation for subsequent layers.

ORNL expertise is being applied to:

- In-situ characterization to enable real-time process monitoring and control
- Development of new high-strength, light-weight thermoplastics and composite materials to achieve "aluminum-like" mechanical properties with polymers



STRATASYS®

3D Printers and Production Systems

U.S. DEPARTMENT OF ENERGY | Advanced Manufacturing